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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,060	08/03/2001	Deepak Pai	10001-29420	7591
2574	7590	07/20/2005	EXAMINER	
JENNER & BLOCK, LLP			MAYEKAR, KISHOR	
ONE IBM PLAZA			ART UNIT	PAPER NUMBER
CHICAGO, IL 60611			1753	

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/922,060

Applicant(s)

PAI, DEEPAK

Examiner

Kishor Mayekar

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 10, 2005 has been entered.

Claim Rejections - 35 USC § 102 and § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 2, 29, 31 and 32 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 07-002501 A in light of Liou (US 6,007,785), a reference cited in a last Office action. JP '501's invention is directed to a high voltage electrode structure of an ozonizer. JP '501 discloses in the abstract and Fig. 1

that the ozonizer comprises all the structures as claimed. Liou discloses in col. 1, lines 13-18 that an ozonizer is a dielectric barrier discharge.

As to the subject matter of claim 9, JP '501 discloses it in Fig. 2.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '501 in light of Liou '785 in view of Birmingham et al. (US 4,954,320), another reference cited in the last Office action. The difference between the reference as applied above and the instant claims is the provision of a transformer. Birmingham shows in a plasma device for treating gas the use of transformer (Fig. 1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as shown by Birmingham because "the use of conventional materials to perform their known functions in a conventional process is obvious", *In re Raner* 134 USPQ 343.

5. Claims 4-10, 26-28, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '501 in light of Liou '785. The differences between the reference as applied above and the instant claims are that the reference is silent

to the material for the ground electrode, the treating of the dielectric substrate, and the shape of the conductor.

As to the first difference, since JP '051 discloses the use of a high voltage electrode made of aluminum layer and Ni-Cr layer, the provision of the same material for the both the high voltage and ground electrodes would have been within the level of ordinary skill in the art as this would result in uniformity of the electrodes. Further, the motivation to make a specific structure is always related to the properties or uses one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

As to the second difference, the issue of treating of the dielectric substrate in a claimed device cannot be given any patentable weight as to the difference between the treated dielectric and the non-treated dielectric substrates.

As to the third difference, change in shape proportion has been held to be obvious, *In re Gibson* 5 USPQ 230. Further, the motivation to make a specific structure is always related to the properties or uses one skilled in the art would

expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552.

6. Claims 4-10 and 13-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '501 in light of Liou '785 in view of Racca et al. (US 6,024,930), another reference cited in the last Office action. The difference between the reference as applied above and the instant claims are the materials for the conductor and the conductive coating. RACCA shows the use of material for the conductor and the conductive coating in an ozonizer (col. 1, lines 51-65 and col. 2, lines 56-67). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as suggested by Racca because the selection of any of known equivalent materials and of material thickness for the electrodes would have been within the level of ordinary skill in the art.

7. Claims 11, 30 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '501 in light of Liou '785 in view of Slipiec et al. (US 3,967,131). The differences between the reference as applied above and the

instant claims are the provision of the recited spacer elements, the use of corrugated dielectric and conductor, and the radial arrangement of the device. Slipiec, another reference cited in the last Office action, shows in an ozonizer (dielectric barrier discharge plasma) the provision of the recited spacer elements (element 21 in Fig. 3), that the corrugation of dielectric and electrodes are known (col. 2, lines 13-19 and col. 28-35), and the provision of a plurality of devices with rectangular cross section and the radial arrangement of the devices (Fig. 3).

As to the first difference, "the use of conventional materials to perform their known functions in a conventional process is obvious", *In re Raner* 134 USPQ 343.

As to the second difference, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as shown by Slipiec because the selection of any of known equivalent arrangements of the dielectric and electrodes would have been within the level of ordinary skill in the art.

As to the latter, the provision of devices' rectangular cross-section, the motivation to make a specific structure is always related to the properties or uses

one skilled in the art would expect the structure to have, *In re Newell* 13 USPQ 2d 1248, *Fromson v. Advance Offset Plate* 225 USPQ 26; *In re Gyurik* 201 USPQ 552. As to the provision of a plurality of devices and the radial arrangement of the devices in the reference's teachings as shown by Slipiec, it would result in increasing the treatment rate.

8. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '501 in light of Liou '785 in view of Gadow et al. (US 5,955,038), another reference cited in a previous Office action. The further difference between the reference as applied above and the above claim is the provision of a plurality of stacked devices. Gadow shows the recited limitation in an ozonizer (Fig. 3). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as shown by Gadow because the provision of a plurality of devices and the stacked arrangement of the devices in the reference's teachings would result in increasing the treatment rate.

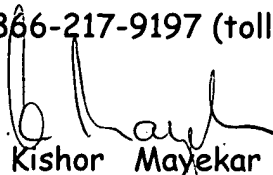
Response to Arguments

9. Applicant's arguments filed May 10, 2005 have been fully considered but they are not persuasive because of the new grounds of rejection to claims 1-¹¹~~12~~ and 13-36 as set forth in the above paragraphs.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kishor Mayekar
Primary Examiner
Art Unit 1753